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**WORKSHOP ON
ACQUISITION AND DISSEMINATION OF DATA
ON MARINE LIVING RESOURCES OF THE INDIAN SEAS**

21 - 23 OCTOBER 1982, COCHIN

RECOMMENDATIONS



**CENTRAL MARINE FISHERIES RESEARCH INSTITUTE
P. B. No. 1912, COCHIN-682 018, INDIA
Indian Council of Agricultural Research**

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FOREWARD

The Central Marine Fisheries Research Institute has been collecting and processing data and disseminating information on the marine fishery resources over the past three decades. In view of the data base already built up at the Institute, the planning Commission at its meeting held on 9th December 1981 presided over by Member, Science, and attended by senior officers from the concerned departments of various Ministries, Government of India, and Institutes, recommended that the Central Marine Fisheries Research Institute should develop its Data Centre as the National Data Centre for Marine Fisheries with a computerised information system and suggested that the Institute conduct an All India Workshop on the theme covering this objective. Accordingly the Institute held a Workshop on "Acquisition and dissemination of data on marine living resources of the Indian Seas" from 21 to 23 October 1982 at Cochin.

The objectives of the Workshop were to (1) review the present methods of data acquisition and dissemination (2) identify data requirements of various user sectors (3) standardise proformae for collection of data from different sources and (4) evolve modalities for quick dissemination of information to end users.

52 delegates representing State and Central Government Departments, the fishing industry, Research Institutes and Universities and public and private sector organisations participated in the Workshop.

The Workshop had five sessions in addition to the opening and plenary sessions and in the sessions the subjects discussed related to the present status of

marine living resources statistics in India, identification of data requirements of user sectors, standardisation of suitable proformae for collection of data from various sectors, constraints in getting data from large fishing vessels operating in the E.E.Z., current procedures of acquisition and dissemination of data and problems and prospects in establishing a more viable marine fisheries information system.

The Workshop realising the importance of data on marine living resources in general and fishery resources in particular in the seas around India for research, planning and management, made a number of recommendations which were discussed at length. The recommendations adopted by the Workshop are presented in the following pages. It is hoped that the concerned agencies will give serious consideration for the implementation of the same. The CMFRI will maintain close linkage with the various organisations in the task of streamlining the modalities for acquisition and processing of data and dissemination of information in which the cooperation of all agencies is solicited.

Cochin-18
8th November 1982

E.G. Silas
Director
Central Marine Fisheries Research Institute
ICAR

WORKSHOP ON ACQUISITION AND DISSEMINATION OF DATA ON
MARINE LIVING RESOURCES OF INDIAN SEAS

ORGANISED BY

CENTRAL MARINE FISHERIES RESEARCH INSTITUTE,

COCHIN - 682018

DURING 21 - 23 OCTOBER 1982

RECOMMENDATIONS

The critical population/food dilemma facing the country has stimulated substantial interest in the sea as source of food and raw material. The central theme of this Workshop has been to enlarge and improve the system of acquisition, processing, analysis and storage of data, and retrieval and dissemination of information on marine living resources, both exploited and exploitable, in general and fishery resources in particular. Before one launches into exploitation and management of these resources, this Workshop has stressed the imperative need to recognise the basic requirements of resources data and to find out ways and means of organising the data system with a view to fostering greater understanding of the resource status, complex exploitation problems faced by the artisanal, mechanised and industrial sectors, and the socioeconomic structure. On the strength of such knowledge would one be able to call the attention of the policy-makers and administrators to ensure judicious exploitation, management and conservation of the resources. Having deliberated the pros and cons of data acquisition and the corollary aspects of dissemination in the light of the opportunities and challenges available in the context of new ocean regimes, the Workshop makes the following

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recommendations for effective implementation by the concerned agencies. While making these recommendations the Workshop recognises the paramount benefits of an integrated centralised system of data acquisition and information dissemination with its complementaries to the end user in various spheres and to the nation.

1. POLICIES AND PRIORITIES

1.1. The Workshop,

realising the vital importance of data on marine living resources in general and fishery resource in particular in the seas around India for planning development and management of this sector, and

considering the long coastline of the country including the Island territories, various types of crafts and gears employed in the exploitation, the nature of landings, the large number of landing places, and the socioeconomic aspects,

recommends that as directed by the planning Commission, the Central Marine Fisheries Research Institute (CMFRI), the premier Institute in the country responsible for providing research and development support for the exploitation, management and conservation of these resources, should immediately strengthen and expand its Fishery Data Centre as a Centralised National Marine Living Resources Data Centre (NMLRDC) and that, the NMLRDC be responsible for acquiring, processing, analysing and storing of data and disseminating the information on the marine living resources and related aspects.

Action to be taken by: Indian Council of Agricultural Research; CMFRI.

1.2. The Workshop,

observing the deep involvement of States, Department of Agriculture of Union Government, Central Government organisations, Indian Council of Agricultural Research, public and private organisations in the development and exploitation of the marine living resources of the country,

noting that resources information is the essential basic prerequisite for all the R & D programmes,

emphasising that there should be a coordinated and integrated approach to the entire system of data acquisition and dissemination of information and

feeling keenly the necessity of a body to coordinate the entire system in the country through the NMLRDC at the Central Marine Fisheries Research Institute,

recommends that an Expert Committee to guide the modalities of functioning and to foster linkages with various organisations in the initial stages may be constituted for a period of two years by the Union Department of Agriculture, and that the Expert Committee, to be set up immediately, be comprised members representing the States, Central Government organisations, ICAR, and public and private sector organisations with the Director CMFRI as Convenor, and

further recommends that this Expert Committee

meets periodically and discusses the progress and constraints in the field and provides guidelines and advice for an effective and functional system for resources data collection and dissemination of information.

Action to be taken by: Department of Agriculture, Government of India; Indian Council of Agricultural Research; CMFRI.

2. STRENGTHENING OF DATA COLLECTION UNITS IN STATES

The Workshop,

noting that the states are primarily concerned with fisheries development within the territorial waters and that the major portion of the exploited fishery resources is produced at present by the small-scale fisheries sector, the data on which are collected by the concerned Departments in the States,

recommends that the state Departments collecting marine fishery statistics be strengthened for this purpose with adequate administrative, technical and financial support so as to ensure a coverage of at least 5% of landing centre-days for data collection and their further analysis.

Action to be taken by: Departments of Fisheries/Statistical Bureaus, Governments of maritime states and Union Territories.

3. DATA ON SMALL-SCALE FISHERIES (ARTISANAL AND SMALL MECHANISED FISHERIES)

3.1 Data collection by States

The Workshop,

observing the complex and diversified nature of fishing operations, wide fluctuations in landings and constraints encountered in complete enumeration of data and

noting that the staff engaged in the resources data collection in the states require periodic training and orientation in the data collection and recording system and

further noting that reliability of the data basically depends on the system methods of collection,

recommends that a system of data collection based on tested statistical design developed by CMFRI be followed by all the states and that the data are recorded and maintained in the accepted proforma drawn up for the purpose in this Workshop; and

further recommends that the field staff in the state departments engaged in this work are periodically trained in the tested data collection system and that the CMFRI may arrange and provide such training to the desired staff.

Action to be taken by: Departments of Fisheries/Statistical Bureaus, Governments of maritime States and Union Territories; CMFRI.

3.2 data collection by CMFRI

The Workshop,

noting that one of the major objectives of CMFRI is to assess the fish stocks of various species in different regions and furnish this information to the planners, development agencies and the

fishermen/fishing industry, and considering that it is necessary to monitor the exploited fish populations more intensively and obtain related biological and environmental data to work on stock assessment,

recommends that the concerned Division of CMFRI be strengthened to achieve a coverage of 5% of landing centre-days by the end of the Sixth Five year plan.

Action to be taken by: Indian Council of Agricultural Research; CMFRI.

3.3 Catch statistics

The Workshop,

observing that there are differences in the estimates of resources exploited in the small-scale fisheries sector and that there is considerable delay in finalising the estimates with the concerned Departments of states and,

stressing the need for speedy and reliable estimate

recommends that the estimate brought out by the NMLRDC after consultations with the states be accepted as the national estimate and that the said estimate be made available reasonably quickly.

Action to be taken by: Department of Agriculture, Government of India; Departments of Fisheries/Statistical Bureaus; Governments of maritime states and Union Territories; CMFRI.

4. DATA ACQUISITION OF OTHER FISHING ACTIVITIES INCLUDING THE LARGE FISHING VESSELS IN THE EEZ

4.1 Supply of data

The Workshop,

appreciating the diversification and extension of fishing operations in the Exclusive Economic Zone to exploit the resources through the operation of different types of gears by the large fishing vessels, including chartered fishing vessels and those operating under different bilateral or multi-lateral arrangements, as also the vessels engaged in exploratory resources surveys, experimental fishing and training,

stressing the importance of acquisition of data on the resources exploited, identified or assessed by those vessels for the development of fisheries of the country,

recommends that all the parties engaged in the above fishing activities shall furnish the data on the exploitation to the NMLRDC at CMFRI; and

further recommends that the Fisheries Division in the Department of Agriculture, Union Ministry of Agriculture may take appropriate measures to ensure that all the larger fishing vessels operated by the industry, Government, public sector, individual entrepreneurs, chartered vessels and those operating under bilateral and multilateral agreements furnish the data to the NMLRDC and

appeals to the owners of fishing vessels to comply and cooperate in this national effort.

Action to be taken by: Department of Agriculture, Government of India; public and private sector organisations/companies engaged in marine fishing directly/through charter.

4.2 Modus operandi of data supply

The Workshop,

observing that there is no mechanism at present to obtain these data notwithstanding its importance in the national context,

recommends that all the vessels engaged in fishing activities referred to in the recommendation 4.1, should record the data in the prescribed proformae drawn up for different types of vessels/operations and accepted in this Workshop which is represented by the Central and State Government representatives, public and private sector organisations, parastatal organisations and research institutes and supply the same to the NMLRDC immediately on conclusion of each voyage and

further recommends that the NMLRDC at CMFRI should make adequate arrangements to supply the required proformae to the fishing organisations.

Action to be taken by: Department of Agriculture, Government of India; public and private sector organisations/companies engaged in marine fishing directly/through charter; CMFRI.

5. DATA PROCESSING AND STORING

5.1 Data processing, storage and retrieval

The Workshop,

stressing that the fishery data obtained from various sources should be properly processed without much time lag for immediate and future use,

observing that it is essential to store the processed or semi-processed data at the NMLRDC for future use and to retrieve the same as and when required by the user agencies, and

noting that enormous data accruing from different kinds and areas of fishing operations are to be subjected to in-depth analysis.

reiterating the Planning Commission's recommendations that CMFRI should develop a computerised information system,

recommends that the CMFRI be immediately equipped with appropriate electronic computing system to facilitate quick processing of data, their storage and retrieval of information.

Action to be taken by: Indian Council of Agricultural Research; CMFRI.

5.2 Maintaining the Confidentiality of data

The Workshop,

noting that different parties are involved in the exploitation of the resources, and

observing that it is essential to maintain the confidentiality of the data/information furnished on the resources exploited by each of the parties,

recommends that the identification particulars be coded to ensure confidentiality.

Action to be taken by: public and private sector organisations/companies engaged in marine fishing directly/through charter; CMFRI.

6. DISSEMINATION OF DATA

The Workshop,

stressing the importance and need for providing information to the planning and developmental agencies, fishing industry and fishermen on production trend, status of fish stocks, technology, management, and forecasting of fishery prospects,

recommends that the NMLRDC should develop an effective and functional system of disseminating the information periodically and provide consultancy services to all sectors.

Action to be taken by: Indian Council of Agricultural Research; CMFRI.

7. OTHER ACTIVITIES

7.1 Environmental and meteorological data

The Workshop,

noting that data on environmental parameters such as temperature, atmospheric pressure, wind speed, and other meteorological conditions should not only facilitate successful fishing operation but also aid in forecasting of weather conditions at sea,

recommends that the India Meteorological Department (IMD) may consider providing required meteorological instruments to larger fishing vessels to record these parameters useful to forecast the weather and climatic conditions over sea, and the IMD may provide the necessary advice and specialised service to facilitate fishing operations of these vessels.

Action to be taken by: India Meteorological Department; public and private organisations/companies engaged in marine fishing directly/through charter; National Institute of Oceanography.

7.2 data on coastal aquaculture/mariculture

The Workshop,

observing that there is an increasing awareness among the fishermen on the prospects and potentials of aquaculture in coastal saline waters and several of them are entering into this field either on full-time basis or part-time basis along with their traditional avocations and

noting that the data on the aquacultural activities taken up by the coastal fishermen and the entrepreneurs would be immensely useful to study the impact on the economy of the coastal villages and to study the trend in the development of the fisheries of the region,

recommends that the NMLRDC, besides collecting data on marine fisheries, also collects and analyses

the data on coastal aquaculture its economics and social impact.

Action to be taken by: Department of Fisheries, Governments of maritime States and Union Territories; Fisheries Institutes of Indian Council of Agricultural Research; Agricultural Universities; Aquaculturists.

7.3 Endangered and rare species

The Workshop,

noting that the populations of certain valuable species in the sea are showing decreasing trend due to exploitation, mortalities and other reasons and some of the endangered species such as the dugong, lesser cetaceans including dolphins, and the turtles occur as incidental catch in fishing operations,

stressing that it is essential to conserve those species showing declining population structure through appropriate management and conservation measures,

recommends that all data/information pertaining to resources, exploitation and mortalities due to strandings and incidental catches in fishing operations of endangered marine mammals and turtles be collected and made available to the NMLRDC for analysis and action.

Action to be taken by: World Wildlife - India; Departments of Fisheries, Governments of maritime States and Union Territories; Bombay Natural History Society; Public and private sector organisations/ companies engaged in fishing directly/through charter; ^{Naval} National Institute of Oceanography; ~~National~~ Physical Oceanographic Laboratory; CMFRI.